IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An information processing apparatus for recording an AV stream to a recording medium, said information processing apparatus comprising:

generating means for generating said AV stream constituting one of a plurality of reproduction paths, each reproduction path including a plurality of AV segments on a timeline, every reproduction path on the recording medium including at least one AV segment not included in any other of the plurality of reproduction paths;

controlling means for controlling the generation of said AV stream by said generating means; and

recording means for recording to said recording medium said AV stream generated by said generating means recording means, the recording means interleaving the plurality of AV segments in increments of a plurality of consecutive angle change units, the plurality of consecutive angle change units being a smallest increment in which angles can be changed;

wherein said AV stream is constituted by data blocks making up predetermined units; and wherein said controlling means controls parameters for said AV stream generated by said generating means as well as a layout of said data blocks, in accordance with information indicative of reproducing characteristics in effect when said AV stream recorded on said recording medium is reproduced therefrom.

Claim 2 (Previously Presented): An information processing apparatus according to claim 1, wherein said information indicative of said reproducing characteristics denotes relations between jump distances between said data blocks recorded in separate locations on one hand, and jump times corresponding respectively to said jump distances on an other hand, for use during reproduction of said AV stream in keeping with said reproduction paths.

Claim 3 (Original): An information processing apparatus according to claim 1, wherein said parameters for said AV stream under control of said controlling means include a rate of said AV stream.

Claim 4 (Original): An information processing apparatus according to claim 1, wherein said parameters for said AV stream under control of said controlling means include the number of said reproduction paths.

Claim 5 (Original): An information processing apparatus according to claim 1, wherein said generating means interleaves said AV stream in such a manner that said plurality of reproduction paths are divided into a predetermined number of said data blocks laid out successively; and wherein said controlling means determines said number of said data blocks in controlling said layout of the interleaved data blocks.

Claim 6 (Original): An information processing apparatus according to claim 1, further comprising inputting means for admitting an input operation made by a user; wherein, in response to said input operation made by said user through said inputting means, said controlling means controls said parameters for said AV stream generated by said generating means as well as said layout of said data blocks by giving priority to a predetermined parameter among said parameters.

Claim 7 (Original): An information processing apparatus according to claim 1, further comprising storing means for storing said information indicative of said reproducing characteristics; wherein said controlling means controls said parameters for said AV stream generated by said generating means as well as said layout of said data blocks on the basis of

said information indicative of said reproducing characteristics which is stored in said storing means.

Claim 8 (Original): An information processing apparatus according to claim 1, further comprising reproducing means for reproducing said AV stream recorded on said recording medium; wherein said controlling means controls said parameters for said AV stream generated by said generating means as well as said layout of said data blocks, in accordance with said information indicative of said reproducing characteristics in effect when said AV stream is reproduced by said reproducing means.

Claim 9 (Original): An information processing apparatus according to claim 1, wherein said controlling means generates first management information which includes map information for indicating locations of entry points of said AV stream and which is used to control AV stream status, said controlling means further generating second management information for managing said reproduction paths by setting up change points of each of said reproduction paths in accordance with said entry points included in said map information; and wherein said recording means further records said first management information and said second management information to said recording medium.

Claim 10 (Original): An information processing apparatus according to claim 9, wherein said generating means encodes said AV stream in such a manner that said AV stream concludes within each of segments delimited by said change points; and wherein said controlling means creates as said map information a correspondence table describing relations of correspondence between presentation timestamps of said entry points on the one hand and packet numbers on the other hand.

Claim 11 (Original): An information processing apparatus according to claim 10, wherein said generating means encodes said AV stream in such a manner that each of said segments has a video stream made up of a closed group of packets called the closed GOP starting with an I picture, the first packet of said closed GOP being a video packet; and wherein said AV stream generated by said generating means is included in a transport stream.

Claim 12 (Original): An information processing apparatus according to claim 11, wherein, on all said reproduction paths, said generating means uses an identical value representing packet ID's of the video packets in said transport stream as well as an identical value representing packet ID's of audio packets in said transport stream.

Claim 13 (Original): An information processing apparatus according to claim 11, further comprising source packetizing means for turning said transport stream in each of said segments into source packets; wherein said recording means records said transport stream which has been turned into source packets in each of said segments by said source packetizing means, to said recording medium as an AV stream file.

Claim 14 (Original): An information processing apparatus according to claim 10, wherein said correspondence table further includes change information indicating whether it is possible to change said reproduction paths at each of said entry points; and wherein said controlling means sets said change points on the basis of said change information.

Claim 15 (Original): An information processing apparatus according to claim 1, wherein said controlling means generates first management information which includes map information for indicating locations of starting points of said AV stream on each of said

reproduction paths as well as locations of entry points of the AV streams and which is used to control AV stream status, said controlling means further generating second management information which includes designation information for designating a starting point and an end point of each of said AV streams and for designating the AV stream for each of said reproduction paths and which is used for reproduction management; and wherein said recording means further records said first management information and said second management information to said recording medium.

Claim 16 (Previously Presented): An information processing apparatus according to claim 15, wherein said generating means encodes said AV stream in such a manner that said AV stream concludes within each of segments delimited by said change points; and wherein said controlling means creates a correspondence table describing relations of correspondence between presentation timestamps of said entry points on one hand and packet numbers on an other hand.

Claim 17 (Original): An information processing apparatus according to claim 16, wherein said generating means encodes said AV stream in such a manner that each of said segments has a video stream made up of a closed group of packets called the closed GOP starting with an I picture, the first packet of said closed GOP being a video packet; and wherein said AV stream generated by said generating means is included in a transport stream.

Claim 18 (Original): An information processing apparatus according to claim 16, wherein said generating means encodes said AV stream in such a manner that each of said segments has a video stream headed by a closed group of packets called the closed GOP, the rest of said video stream comprising unclosed GOP's.

Claim 19 (Original): An information processing apparatus according to claim 17, further comprising source packetizing means for turning said transport stream in each of said segments into source packets; wherein said recording means records said transport stream which has been turned into source packets in each of said segments by said source packetizing means, to said recording medium as an AV stream file.

Claim 20 (Original): An information processing apparatus according to claim 19, wherein said controlling means creates said correspondence table corresponding to each of the AV stream files.

Claim 21 (Currently Amended): An information processing method for use with an information processing apparatus for recording an AV stream to a recording medium, said information processing method comprising:

determining parameters for said AV stream as well as a layout of data blocks constituting said AV stream, in accordance with information indicative of reproducing characteristics in effect when said AV stream recorded on said recording medium is reproduced therefrom;

generating said AV stream constituting one of a plurality of reproduction paths based on said parameters for said AV stream and on said layout of said data blocks determined in said determining along with said parameters, each reproduction path including a plurality of AV segments on a timeline, every reproduction path on the recording medium including at least one AV segment not included in any other of the plurality of reproduction paths; and

controlling the recording of said AV stream generated in said generating to said recording medium, the controlling including interleaving the plurality of AV segments in

increments of a plurality of consecutive angle change units, the plurality of consecutive angle change units being a smallest increment in which angles can be changed.

Claim 22 (Currently Amended): A computer readable program storage medium which stores a program for causing a computer to perform a method to record an AV stream to a recording medium, said method comprising:

determining parameters for said AV stream as well as a layout of data blocks constituting said AV stream, in accordance with information indicative of reproducing characteristics in effect when said AV stream recorded on said recording medium is reproduced therefrom;

generating said AV stream constituting one of a plurality of reproduction paths based on said parameters for said AV stream and on said layout of said data blocks determined in said determining along with said parameters, each reproduction path including a plurality of AV segments on a timeline, every reproduction path on the recording medium including at least one AV segment not included in any other of the plurality of reproduction paths; and

controlling the recording of said AV stream generated in said generating to said recording medium, the controlling including interleaving the plurality of AV segments in increments of a plurality of consecutive angle change units, the plurality of consecutive angle change units being a smallest increment in which angles can be changed.

Claim 23 (Canceled).

Claim 24 (Currently Amended): An information processing apparatus for recording an AV stream to a recording medium, said information processing apparatus comprising:

an AV stream generator configured to generate said AV stream constituting one of a plurality of reproduction paths, each reproduction path including a plurality of AV segments on a timeline, every reproduction path on the recording medium including at least one AV segment not included in any other of the plurality of reproduction paths;

a controller configured to control generation of said AV stream by said AV stream generator; and

a recorder configured to record to said recording medium said AV stream generated by said AV stream generator, the recorder configured to interleave the plurality of AV segments in increments of a plurality of consecutive angle change units, the plurality of consecutive angle change units being a smallest increment in which angles can be changed,

wherein said AV stream is constituted by data blocks making up predetermined units, and said controller is configured to control parameters for said AV stream generated by said AV stream generator as well as a layout of said data blocks in accordance with information indicative of reproducing characteristics in effect when said AV stream recorded on said recording medium is reproduced therefrom.

Claim 25 (Previously Presented): An information processing apparatus according to claim 24, wherein each reproduction path includes a plurality of AV segments corresponding with AV segments in other reproduction paths, corresponding AV segments in different reproduction paths having identical start and end times.

Claim 26 (New): An information processing apparatus according to claim 24, wherein a number of the plurality consecutive angle change units is based on an access speed of a drive reproducing data from the recording medium.

Claim 27 (New): An information processing apparatus according to claim 24, wherein a number of the plurality of consecutive angle change units is based on an amount of management data in file data.

Claim 28 (New): An information processing apparatus according to claim 24, wherein a number of the plurality of consecutive angle change units is selected by a user.